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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,167	07/07/2003	Ching-Mao Yeh	US5670	8611

54000 7590 04/12/2007

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EXAMINER	
MOORE, TERENCE J	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/615,167	YEH ET AL.	
	Examiner	Art Unit	
	Terence Moore	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on March 22, 2007.

Claims 1-7 are now pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 1, 2 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jones et al. (U.S. Patent No. 6,404,764 B1)** in view of **Wu et al. (U.S. Patent No. 7,123,606 B2)**.

Consider **claim 1**, Jones et al. clearly disclose a voice-over-Internet protocol (VoIP) device (**figures 2** and **3**, and **column 2, lines 11-41** show and describe a network premises gateway **10**) comprising:

(a) a subscriber line interface circuit serving as an interface for communications with a telephone (**figure 5** shows a block diagram of a telephony subsystem **34** which is part of the network premises gateway **10**; **figure 5** and **column 4, lines 4-22** show and describe a plain old telephone service (POTS) interface **40** which serves as the initial interface within the telephony subsystem **34** for an in-premises POTS network **20**).

(b) a processor coupled to the subscriber line interface circuit to determine whether a transmission from the telephone through the subscriber line interface circuit is a public switched telephone network (PSTN) phone number or a VoIP phone number, wherein when the transmission is a VoIP phone number, the processor routes the transmission to the VoIP network, and when the transmission is a PSTN phone number, the processor instructs the subscriber line interface circuit to generate a dual-tone multi-frequency redial number (**figure 5**, and **column 9, lines 27-65** show and describe a dual tone multi-frequency (DTMF) detection and call progress generator **52** (within the

telephony manager **38,** which is part of the telephony subsystem **34** portion of the network premises gateway **10**) receiving a sequence of DTMF signals and causing the network premises gateway **10** to behave in different ways depending on what signals were detected – either entering a VoIP mode and placing the call via the internet if a particular sequence of predetermined signals is detected, or entering a POTS mode and transmitting the sequence of signals to the PSTN if a particular predetermined sequence of signals is not received); and

(c) a dual-tone multi-frequency coupling circuit coupled between the subscriber line interface circuit and the public switched telephone network for receiving the dual-tone multi-frequency redial number from the subscriber line interface circuit when the transmission is determined as a PSTN phone number, and routing the dual-tone multi-frequency redial number to the public switched telephone network (**figure 5**, and **column 4, lines 23-31** show and describe a telephony crossbar **42** which couples the telephony manager **38** and the POTS interface **40** to each other and routes those telephony calls to be routed to the PSTN by sending the digitally encoded audio signals to the POTS interface **40**. The telephony crossbar **42**, telephony manager **38**, and the POTS interface **40** are all part of the telephony subsystem **34** portion of the network premises gateway **10**).

However, Jones et al. do not specifically disclose a relay selectively coupled to a public switched telephone network (PSTN) or coupled to a VoIP network through the subscriber line interface circuit.

In the same field of endeavor, Wu et al. disclose a line transfer switch (which reads on the relay) connected to the VoIP network which can be ordered to auto-switch to a mode which connects to the PSTN when the VoIP network is not able to communicate to the outside world due to loss of external power (**column 1 line 54 – column 2 line 5**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a line transfer switch (or relay) as shown by Wu et al. in the network premises gateway taught by Jones et al. for the purpose of system longevity (especially in the case of emergencies), by making it possible to switch over to the battery-powered PSTN to keep communication possible in the event the VoIP network loses power.

Consider **claim 2**, and **as applied to claim 1 above**, Jones et al., as modified by Wu et al., also disclose a dual-tone multi-frequency coupling circuit comprising of: (a) a switching element having a first terminal and a second terminal and controlled by the processor, wherein the switching element is turned on by the processor when the transmission is determined as a PSTN phone number; (b) a first coupling device coupled between the subscriber line interface circuit and the first terminal of the switching element for receiving the dual-tone multi-frequency redial number from the subscriber line interface circuit; and (c) a second coupling device coupled between the second terminal of the switching element and the public switched telephone network for routing the dual-tone multi-frequency redial number to the public switched telephone network when the switching element is turned on (as described

above, **figure 5**, and **column 4, lines 23-31** show and describe a telephony crossbar **42** which couples the telephony manager **38** and the POTS interface **40** to each other and routes those telephony calls to be routed to the PSTN by sending the digitally encoded audio signals to the POTS interface **40**. The telephony crossbar **42** reads on the switching element, the telephony manager **38** (when it determines through the DTMF detection and call progress generator **52** that the call is a PSTN call) reads on the first coupling device, and the POTS interface **40** (when used to transmit outgoing calls) reads on the second coupling device).

Consider **claim 5**, and **as applied to claim 2 above**, Jones et al., as modified by Wu et al., disclose the claimed invention except for where the switching element is a transistor.

Nonetheless, the Examiner takes Official Notice of the fact that it is notoriously well known in the art the use of a transistor as an electronic switch.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a transistor, as well known in the art, in the DTMF detection circuit taught by Jones et al. and Wu et al. for the purpose of an electronic switch to either (1) allow the transmission of DTMF digits to the PSTN network if the digits represent a PSTN number or (2) not allow the transmission of DTMF digits to the PSTN network if the digits do not represent a PSTN number.

4. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jones et al. (U.S. Patent No. 6,404,764 B1)** in view of **Wu et al. (U.S. Patent No.**

7,123,606 B2), **as applied to claim 2 above**, and further in view of **Schornack et al. (U.S. Patent No. 7,089,034 B1**).

Consider **claim 3**, and **as applied to claim 2 above**, Jones et al., as modified by Wu et al., disclose the claimed invention except where the first coupling device is a capacitor.

In the same field of endeavor, Schornack et al. clearly shows and discloses a DTMF detection circuit with various components (**figure 6E** and **column 13, lines 16-31** shows and describes these components); the components include a capacitor **22** on the same side of the transformer **23** as that shown in **figure 2** of the current application.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a capacitor as shown by Schornack et al. in the DTMF detection circuit taught by Jones et al. and Wu et al. for the purpose of blocking any DC voltages from traveling any further in the circuit (e.g., to a transformer).

Consider **claim 4**, and **as applied to claim 2 above**, Jones et al., as modified by Wu et al., disclose the claimed invention except where the second coupling device is a transformer.

In the same field of endeavor, Schornack et al. clearly shows and discloses a DTMF detection circuit with various components (**figure 6E** and **column 13, lines 16-31** shows and describes these components); the components include a transformer **23** that transforms DTMF energy, similar to the transformer shown in the **figure 2** of the current application.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a transformer as shown by Schornack et al. in the DTMF detection circuit taught by Jones et al. and Wu et al. for the purpose of electrically isolating the DTMF detection circuit from the POTS interface.

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jones et al. (U.S. Patent No. 6,404,764 B1)** in view of **Wu et al. (U.S. Patent No. 7,123,606 B2), as applied to claim 1 above**, and further in view of **Dunlap (U.S. Patent Application Publication No. US 2002/0114439 A1)**.

Consider **claim 6**, and **as applied to claim 1 above,** Jones et al., as modified by Wu et al., disclose the claimed invention except for a data access arrangement for detecting the status of the public switched telephone network and instructing the relay to allow the dual-tone multi-frequency coupling circuit to transmit the dual-tone multi-frequency redial number to the public switched telephone network when the public switched telephone network is not busy.

In the same field of endeavor, Dunlap discloses a microprocessor that is used together with a data access arrangement (DAA) to determine that (1) the POTS phone is off-hook and (2) no incoming call is presently occurring – before sending a dial tone to the user, and allowing the user to input DTMF digits from the POTS phone for subsequent processing and routing to the PSTN interface (**paragraph 0038**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a microprocessor/DAA arrangement as

shown by Dunlap in the VoIP device taught by Jones et al. and Wu et al. for the purpose of being able to verify the availability of the PSTN interface verification prior to allowing the transmission of dialed digits onto that interface.

6. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jones et al. (U.S. Patent No. 6,404,764 B1)** in view of **Wu et al. (U.S. Patent No. 7,123,606 B2), as applied to claim 1 above**, and further in view of **Smith et al. (U.S. Patent No. 6,975,717 B1)**.

Consider **claim 7**, and **as applied to claim 1 above**, Jones et al., as modified by Wu et al., disclose the claimed invention except for where the processor determines the transmission from the telephone as a VoIP phone number when the transmission is a common telephone number, and determines the transmission from the telephone as a PSTN phone number when the transmission is an important or emergency phone number.

In the same field of endeavor, Smith et al. disclose a method by which selective processing of calls using alternative network telephony is disclosed (**column 1, lines 19-21**), where one type of alternative processing is Internet protocol (IP) telephony using the IP protocol (**column 1, lines 39-41**). A call processing system determines whether a number dialed by a user on a telephone handset (or other device) should be processed via the PSTN or should be processed using alternative network telephony (e.g., IP telephony) (**column 3, lines 18-30**). **Figure 6** contains a flowchart illustrating this process. In step **608**, the dialed number is compared against some criteria. For one

embodiment, the criteria for determining whether a call should be completed via the PSTN comprises determining whether the dialed number was the emergency number "9-1-1" (**column 7, lines 13-17**), but it could look for other dialed numbers as well (**column 7, lines 1-5**). In fact, it is strongly suggested that emergency "9-1-1" and related calls be processed by the PSTN (as opposed to alternative network telephony) to satisfy certain federal, state and local laws and regulations such as the mandatory inclusion of caller ID functionality (**column 1, line 59 – column 2, line 4**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a criteria where dialed numbers are processed by VoIP, with the exception of ""9-1-1" and other important numbers being processed by PSTN, as shown by Smith et al., in the VoIP device taught by Jones et al. and Wu et al. for the purpose of allowing such regulations such as the mandatory inclusion of caller ID functionality within emergency and other important calls to be met.

Response to Arguments

7. Applicant's arguments filed on March 22, 2007 have been fully considered but they are not persuasive.

Regarding **claim 1, 2, and 5**, Applicant argues, on pages 7 and 8 of the remarks, that Jones et al. fail to teach that "the processor instructs the subscriber line circuit to generate a DTMF redial number when the transmission is a PSTN phone number". The Examiner respectfully disagrees. In view of Examiner's understanding of the Jones et al. reference, the POTS interface **40** and the DTMF detection and call progress generator

52 together read on the subscriber line interface circuit. The POTS interface **40** serves as an interface for communications with a telephone (**column 4, lines 4-6**), and the DTMF detection and call progress generator **52** actually generates the DTMF redial number upon proper instruction when the dialed number is determined to be a PSTN number (**column 3, lines 55-59**). In addition, the DTMF detection and call progress generator **52** and the telephony crossbar **42** together read on the processor that is coupled to the subscriber line interface circuit. The DTMF detection and call progress generator **52** determines whether a transmission from the telephone through the subscriber line interface circuit is a PSTN phone number or a VoIP phone number (**column 9, lines 27-65** discuss the DTMF detection and call generator **52** that determines whether a call is a PSTN number or a VoIP number based on the existence or non-existence of a sequence of predetermined signals). If the number is VoIP, the telephony crossbar **42** will route the call to the VoIP network (**column 4, lines 26-27**). Lastly, the telephony crossbar **42** reads on the dual-tone multi-frequency coupling circuit coupled between the subscriber line interface circuit and the public switched telephone network for receiving the dual-tone multi-frequency redial number from the subscriber line interface circuit when the transmission is determined to be PSTN, and routing the DTMF number to the PSTN (the DTMF number generated by the DTMF detection and call generator **52** (**column 3, lines 55-59**) is sent to the telephony crossbar **42** which will route the call to the PSTN (**column 4, lines 26-27**)).

Regarding claims **1, 3, 4, and 6**, it has never been suggested that any of the cited references by Wu et al., Schornack et al., or Dunlap help to teach that "the

processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN number". The only reference ever cited as teaching that particular concept is the one by Jones et al.

Regarding **claims 3 and 4**, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Also, regarding **claim 3**, in addition to the above, the motivation to combine the capacitor with the rest of the references was that the capacitor blocks DC voltages from traveling any further in the circuit. For this reason, the capacitor is useful as a coupling device.

Also, regarding **claim 4**, in addition to the above, the motivation to combine the transformer with the rest of the references was that the transformer electrically isolates the circuits from voltages that may come in from the POTS interface. For this reason, the transformer is useful as a coupling device.

Additionally, Applicant's failure to adequately traverse the Examiner's taking of Official Notice in the last Office Action is taken as admission of the fact noticed (i.e., that it is notoriously well known in the art to use a transistor as an electronic switch).

Consequently, in view of the above reasons and having addressed Applicant's argument, the previous rejection is maintained and made FINAL by the Examiner.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Terence Moore whose telephone number is (571) 270-1775. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00 pm (alternate Fridays off).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Terence Moore
T.M./tm

April 2, 2007

RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
5/4/07